UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/848,923	05/03/2001	Paul S. Hahn	062891.0562	7109

5073 7590 05/25/2006		EXAMINER
BAKER BOTTS L.L.P.		HSU, ALPUS
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ART UNIT	PAPER NUMBER
2616	

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DATE MAILED: 05/25/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>21 March 2006</u>.

2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-6,9-16,19-26,29 and 30* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-6,10-16,20-26 and 30* is/are rejected.

7)☒ Claim(s) *9,19 and 29* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

        1.☐ Certified copies of the priority documents have been received.

        2.☐ Certified copies of the priority documents have been received in Application No. _____.

        3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

1.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
> such that the subject matter as a whole would have been obvious at the time the invention was made to a person
> having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the
> manner in which the invention was made.

2.   This application currently names joint inventors. In considering patentability of the

claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various

claims was commonly owned at the time any inventions covered therein were made absent any

evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out

the inventor and invention dates of each claim that was not commonly owned at the time a later

invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c)

and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

3.   Claims 1, 2, 4, 5, 10, 11, 12, 14, 15, 20, 21, 22, 24, 25 and 30 are rejected under 35

U.S.C. 103(a) as being unpatentable over BAKER in U.S. Patent No. 6,580,694 B1 (of record).

        Regarding claims 1 and 11, BAKER discloses a method and a set of logic for managing

time-sensitive packetized data streams at a receiver (101), comprising: receiving a time-sensitive

packet of a data stream (col. 3, lines 3-6); comparing an energy level of a payload signal of the

packet to an energy level of a payload signal of a previous packet (col. 6, lines 21-28).

        BAKER differs from the claims, in that, it does not disclose the feature of either dropping

or playing the packet based on the comparison. However, BAKER does teach a conventional

playback mechanism (col. 3, lines 8-11) for playing back packet based on the detection of signal

or silence by checking the marker bit in the packet (col. 4, lines 14-51). BAKER also discloses

the comparison of energy levels between current packet and previously received packet for

determining whether the marker bits of one or more packets are either not sent or are used incorrectly by the transmit process (col. 6, lines 21-28), which inherently signifies/implies that the current packet either containing errors or being transmitted improperly/incorrectly and therefore should be dropped.

Therefore, it would have been obvious to one of ordinary skill in the art to implement the method and logic in BAKER to either dropping or playing the packet based on the comparison of energy level since it is well known in the art to drop packet when it contains error or when it is transmitted improperly/incorrectly based on the determination of whether the marker bits of one or more packets are either not sent or are used incorrectly by the transmit process by comparing energy levels of payloads between current packet and previous packet to further improve the system reliability.

Regarding claims 2, 10, 12 and 20, BAKER teaches the further steps and logics of: storing the packet in a buffer (col. 3, line 7); either dropping or playing the packet based on the comparison and a fullness of the buffer; and determining whether an overflow condition exists in the buffer (col. 4, lines 1-10).

Regarding claims 4, 5, 14 and 15, BAKER discloses that the time-sensitive packet comprises a real-time packet and the payload signal is a voice signal (col. 3, lines 34-43).

Regarding claim 21, BAKER discloses a system for managing time-sensitive packetized data streams at a receiver (101), comprising: means for receiving a time-sensitive packet of a data stream (101 and col. 3, lines 3-6); means for comparing an energy level of a payload signal of the packet to an energy level of a payload signal of a previous packet (142 and col. 6, lines 21-28).

BAKER differs from the claims, in that, it does not include the means for either dropping or playing the packet based on the comparison. However, BAKER does teach a conventional playback mechanism (col. 3, lines 8-11) for playing back packet based on the detection of signal or silence by checking the marker bit in the packet (col. 4, lines 14-51). BAKER also discloses the comparison of energy levels between current packet and previously received packet for determining whether the marker bits of one or more packets are either not sent or are used incorrectly by the transmit process (col. 6, lines 21-28), which inherently signifies/implies that the current packet either containing errors or being transmitted improperly/incorrectly and should be dropped.

Therefore, it would have been obvious to one of ordinary skill in the art to implement the system in BAKER to include the means for either dropping or playing the packet based on the comparison of energy level since it is well known in the art to drop packet when it contains error or is transmitted improperly/incorrectly based on the determination of whether the marker bits of one or more packets are either not sent or are being used incorrectly by the transmit process by comparing energy levels of payloads between current packet and previous packet to further improve the system reliability.

Regarding claims 22 and 30, BAKER teaches the further means for storing the packet in a buffer (col. 3, line 7); means for either dropping or playing the packet based on the comparison and a fullness of the buffer; and means for determining whether an overflow condition exists in the buffer (col. 4, lines 1-10).

Regarding claims 24 and 25, BAKER discloses that the time-sensitive packet comprises a real-time packet and the payload signal is a voice signal (col. 3, lines 34-43).

4.   Claims 3, 13 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over

BAKER in U.S. Patent No. 6,580,694 B1 in view of KRAMER et al. in U.S. Patent no.

6,658,027 B1 (both of records).

Regarding claims 3, 13 and 23, BAKER differs from the claims, in that, it does not

disclose the feature of inserting a filler packet based on the comparison and the fullness of the

buffer, which is well known in the art and commonly used in audio streaming applications to

avoid the discontinuity of signal stream playback.

KRAMER et al., for example, from the similar field of endeavor, teaches the use of filler

packet (silence frame(s) in abstract) for smoothing the signal stream playback, which can be

easily adopted by one of ordinary skill in the art into the method, logic, and system in BAKER

for providing continuity of audio stream playback to improve the system continuity and

efficiency.

5.   Claims 6, 16 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over

BAKER in U.S. Patent No. 6,580,694 B1 in view of CASON in U.S. Patent No. 6,249,757 B1

(all of records).

Regarding claims 6, 16 and 26, BAKER differs from the claims, in that, it does not

disclose the feature of analyzing the energy level of the payload signal of the packet by

determining a short term average energy of the payload signal; determining a noise floor

estimate; and comparing the short term average energy and the noise floor estimate, which is

well known in the art and commonly used in audio communication for voice activity detection.

CASON, for example, from the similar field of endeavor, teaches the analysis of the

energy level of the payload signal of the packet by determining a short term average energy of

the payload signal; determining a noise floor estimate; and comparing the short term average

energy and the noise floor estimate (abstract), which can be easily adopted by one of ordinary

skill in the art into the method, logic, and system in BAKER for providing voice activity

detection to further improve the system reliability.

6.   Claims 9, 19 and 29 are objected to as being dependent upon a rejected base claim, but

would be allowable if rewritten in independent form including all of the limitations of the base

claim and any intervening claims.

7.   The prior art made of record and not relied upon is considered pertinent to applicant's

disclosure.

        Graumann et al. and Simard et al. are further cited to show the feature of comparison of

energy level between data frames for differentiating between speech and noise and voice activity

detection similar to the claimed invention.

8.   Applicant's arguments filed March 21, 2006 have been fully considered but they are not

persuasive.

        In the remark, the applicant mainly argued that in Baker, there is no disclosure of

dropping or playing a packet based on the detection of signal or silence, and the Office Action

cites to nothing in the art as disclosing or obviating this element and the rejection is based on

"Official Notice," "well-known art," common knowledge or other information within the

Examiner's personal knowledge.

        The examiner disagreed for the following reasons:

        First of all, the examiner only relies on the feature of detecting signal or silence for

playing the packet since there is no packet to be dropped when it detects silence.

Secondly, the examiner relies on the feature of comparing energy levels between the current packet and previously received packet to determine whether the marker bits of one or more packets are either not sent or are being used incorrectly by the transmit process for dropping the packet since it is inherent to drop a packet when it is determined to contain error or when it is transmitted improperly/incorrectly.

To further support this rational, the applicant is directed the attention to the Raman reference (U.S. Patent No. 5,819,217), which differentiates between speech and noise by comparing the energy level between current packet and previous packet, and thereafter dropping the packet when it is determined to be a noise (col. 2, lines 39-64.

In view of the above reasoning, the examiner believes that all rejections under 103(a) should be sustained.

9.   **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.
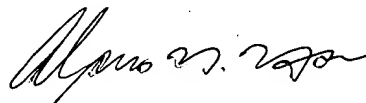
10.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Alpus H. Hsu whose telephone number is (571)272-3146. The

examiner can normally be reached on M-F (5:30-3:00) First Friday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Wellington Chin can be reached on (571)272-3134. The fax phone number for the

organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR

system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would

like assistance from a USPTO Customer Service Representative or access to the automated

information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

AHH   Alpus H. Hsu
                                                                      Primary Examiner
                                                                      Art Unit 2616